



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,859	04/12/2001	Francois Roche	025000-069	1977

7590 05/05/2003

E. Joseph Gess, Esq.
Burns, Doane, Swecker & Mathis, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

PRETKA, V WALTER

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,859

Applicant(s)

ROCHE ET AL.

Examiner

Walter Pretka

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17, 18 and 29 is/are allowed.
- 6) ☒ Claim(s) 1-6, 22-24 and 30-33 is/are rejected.
- 7) ☒ Claim(s) 7-16, 19-21, 25-28 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 4, 5, 22, 23 and 30-33 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.P.N. 6,039,816 to Morita et al.
2. Morita reads on claims 1, 4, and 22 which disclose a method for removing solid deposits of N₂O₅ from an ozone generator; said generator comprising: (a) a first and second electrode (column 17, line 32), inherently the electrodes are separated from each other and have a passageway therebetween. The solid deposits of N₂O₅ located within said passageway are inherently removed with the passing of the warm cleaning gas (column 1, line 65 *et seq*) through said passageway. The warm cleaning gas exiting said ozone generator has a temperature sufficient to maintain the N₂O₅ in a gaseous state until said N₂O₅ exits said ozone generator.
3. Morita reads on claims 2, 5, 23, and 30-33 which discloses a method for removing solid deposits of N₂O₅ from an ozone generator, said generator comprising a housing (Figure 3A, element 20 and associated relevant text) enclosing an interior having an inlet (Figure 3A, element 30B and associated relevant text) and an outlet (Figure 3A, element 30C and associated

Art Unit: 1746

relevant text). Claim 2 further discloses a pair of spaced electrodes mounted within said interior (column 17, line 32), said electrodes being separated from each other (column 17, line 32), the solid deposits of N₂O₅ located within said interior, said method comprising step (i) of passing a warm cleaning gas (oxygen) through said interior (column 1, line 65 *et seq*) from said inlet (30B) to said outlet (30C). Inherently the gas (column 17, line 32) will evaporate at least some of the deposited N₂O₅. The warm cleaning gas exiting said ozone generator has a temperature sufficient to maintain the N₂O₅ in a gaseous state until said N₂O₅ exits said ozone generator.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 6, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita and 4,954,321 to Jensen.
5. With respect to claims 3, 6, and 24 disclosing a method and an ozone generator. The generator comprises a housing and a plurality of support tubes mounted within the housing, the support tubes each support one or more dielectrics and the support tubes have an inner wall and a passageway between said inner wall of the support tubes and the dielectrics. The generator also includes a support tube inlet in communication with a support tube outlet through the passageway. The one step method comprising the step of passing a warm cleaning gas through said passageway, disclosed in Morita as pure oxygen (column 1, line 66).

Art Unit: 1746

6. With respect to the method Morita discloses the step of passing a warm cleaning gas through the passageway (column 1, line 65). The generator disclosed in Morita at column 17 line 1 et seq. is a plate ozonizer. Morita does not disclose the tube ozone generator of the instant claim. Jensen discloses the tube ozone generator. See Figure 7 and 8 and associated text. One of ordinary skill in the art would have been motivated to combine the teachings of Morita and Jensen because plate and tube ozonizers are taught to be equivalent.

Allowable Subject Matter

7. The following is an examiner's statement of reasons for allowance:

8. With respect to claim 29, the claimed temperature range and pH controller are not found in the art. The art of record, while in the aggregate disclosing the various components fails to provide the motivation for making the claimed combination.

9. With respect to claims 17-18 the structure and steps associated with the ozonizer cleaning system of the present invention are not identically disclosed in the prior art of record. Although shell and tube heat exchangers are well known in the art, the use in ozonizer cleaning systems is not apparently taught nor does the record provide the motivation for making the claimed combination.

Art Unit: 1746

10. Claims 7-21,25-29 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. With respect to claim 7-8 disclosing that the flow of said cleaning gas through the support tube is such that the temperature of said cleaning gas exiting at each said support tube outlet is between 47C and 65C. The prior art of record fails to identically disclose the specific temperature range claimed, further the prior art of record fails to provide motivation for substituting the claimed temperature range.

12. With respect to claim 9, further limiting claim 6 and disclosing that the flow of said cleaning gas is heated to between 55C and 60C before entering the support tube inlet and exits said support tube outlet between 50C and 55C. The prior art of record fails to identically disclose the specific temperature ranges as claimed, further the prior art of record fails to provide motivation for substituting the claimed temperature range.

13. With respect to claims 10-12 and 16 the structure and steps associated with the ozonizer cleaning system of the present invention are not identically disclosed in the prior art of record. Although shell and tube heat exchangers are well known in the art, the use in ozonizer cleaning systems is not apparently taught nor does the record provide the motivation for making the claimed combination.

Art Unit: 1746

14. With respect to claims 13-15 further limiting claim 12, again the claimed temperature ranges are not identically disclosed in the prior art of record, and further the prior art of record fails to provide motivation for substituting the claimed temperature ranges.

15. With respect to claim 19-21 and 25-27, disclosing the step of adding a neutralizing agent to maintain an approximately constant pH in a water trap that has received a sufficient portion of a cleaning gas. The prior art of record is silent with respect to claimed water trap.

16. With respect to claim 28, disclosing the creation of a measurable change in pH from an operating reference pH and monitoring said pH to determine when said pH returns to and remains substantially at said operating reference pH. The claimed monitoring and control system is not disclosed in the prior art of record.

17. With respect to claim 34, disclosing the cleaning gas is warmed to between 47C and 65C. The prior art of record fails to identically disclose the specific temperature range claimed, further the prior art of record fails to provide motivation for substituting the claimed temperature range.

18. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1746

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Pretka whose telephone number is (703) 305 5103. The examiner can normally be reached on Monday through Thursday 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308 4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872 9310 for regular communications and (703) 873 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305 5103.

Walter Pretka
Patent Examiner

April 29, 2003

A handwritten signature in black ink, appearing to read 'Randy Gulakowski', written in a cursive style.

HANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700